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# Alfa Laval SolidC UltraPure Centrifugal Pump

When Higher Purity is the Issue

## Applications

The SolidC UltraPure pump is an efficient and economical centrifugal pump, which meets the requirements of the pharmaceutical industries. It provides gentle product treatment and is chemically resistant. SolidC UltraPure is available in four sizes.

## Standard design

As standard the SolidC UltraPure is delivered with a 45° outlet to ensure adequate venting.

The SolidC UltraPure pump is designed for CIP and SIP with emphasis on large internal radii and cleanable seals. SolidC UltraPure is supported on four adjustable legs.

## Shaft seals

The SolidC UltraPure pump is equipped with either an external single or a flushed shaft seal. Both have stationary seal rings in acid-resistant steel AISI 329 with sealing surface in silicon carbide and rotating seal rings in silicon carbide. The secondary seal of the flushed seal is a long lasting lip seal.



## TECHNICAL DATA

### Materials

Product wetted steel parts: . . . W. 1.4404 (316L) with material traceability 3.1 acc. to EN10204.

Other steel parts: . . . . . Stainless steel.

Product wetted seals: . . . . . EPDM- USP Class VI, 121°C Chapter 88, and Chapter 87.

Finish: . . . . . Mech Ra ≤ 0.5.

### Connections for FSS:

6mm tube/Rp 1/8".

### Motor

Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, IP 55 (with drain hole sealed with labyrinth plug), insulation class F.

### Warranty

Extended 3-years warranty on the SolidC UltraPure Centrifugal Pump range. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

## OPERATING DATA

### Pressure

Max. inlet pressure: . . . . . 400 kPa (4 bar).

### Temperature

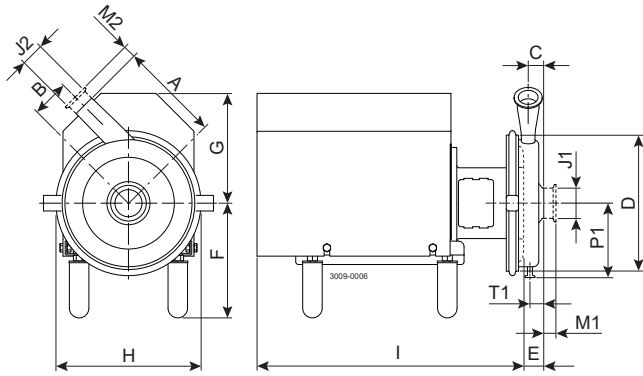
Temperature range: . . . . . -10°C to +120°C (EPDM).

### Flushed shaft seal (FSS):

Water pressure inlet: . . . . . max. 100 kpa (1 bar).

Water consumption: . . . . . 0.25 -0.5 l/min.

Dimensions (mm)



Pump specific measures

Pump Model	SolidC-1 UltraPure	SolidC-2 UltraPure	SolidC-3 UltraPure	SolidC-4 UltraPure
A	180	200	210	230
B	67	94	121	120
C	28	35	31	27
D	238	227	311	333
E	40	47	44	44
P1	130	150	164	175
T1	21	27	23	21

Motor specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160
Motor kW	1.5/2.2	3.0	4.0	5.5/7.5	11/15/18.5/22
F(max)*	246	256	259	279	307
G	126	137	136	164	208
H	227	278	277	327	377
I	405	469	468	543	651

\*Possible to reduce dimension F by min. 15 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	SolidC-1 UltraPure	SolidC-2 UltraPure	SolidC-3 UltraPure	SolidC-4 UltraPure
Motor range (IEC)	IEC90-IEC112	IEC100-IEC160	IEC132-IEC160	IEC132-IEC160

Dimensional data are based on 2 pole, WEGmotors.

Connections

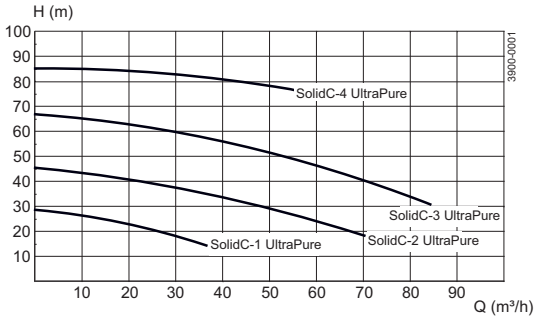
Pump Model		SolidC-1 UltraPure	SolidC-2 UltraPure	SolidC-3 UltraPure	SolidC-4 UltraPure
Clamp ISO 2037	M1	21	21	21	21
	M2	21	21	21	21
Clamp ASME BPE	M1	13	13	13	29
	M2	13	13	13	13
Clamp for ISO-1127	M1	36	36	48	48
	M2	36	36	36	36
Clamp DIN 32676	M1	21	64	64	64
	M2	21	21	21	21
J1*		51 / 2"	63.5 / 2.5"	76.1 / 3"	76.1 / 3"
J2*		38 / 1.5"	38 / 1.5"	38 / 1.5"	51 / 2"

\* Other dimensions available on request.

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	TC Clamp	ISO 2037 Clamp
1/2"	12.7	12.7

**Flow chart**



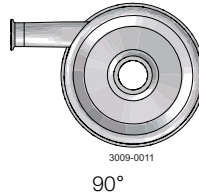
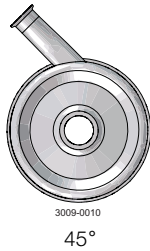
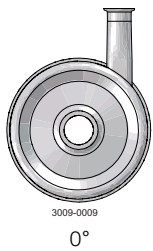
Frequency: 50 Hz

Speed /synchr.): 3000 rpm

**Options**

- A. Impeller with reduced diameter.
- B. Motor for other voltage and/or frequency.
- C. Half speed motor.
- D. Flushed shaft seal.
- E. Horizontal drain connection.
- F. No drain.
- G. Product wetted surface finish mechanically polished to  $Ra \leq 0.8 \mu m$ .
- H. Product wetted surface finish electropolished to  $Ra \leq 0.4 \mu m$ .
- I. Product wetted elastomers FPM or FEP.
- J. Hydrostatic testing with certificate.
- K. Surface finish measurement with certificate.
- L. 0°, 90° or 270° outlet, see illustration below.

**Available outlet positions - som ved LKH UltraPure**



**Available drain connections**



1/2" vertical drain

**Available connections:**

- Tri-clamp for ASME
- Clamp for ISO 1127



1/2" horizontal drain

**Available connections:**

- Tri-clamp for ASME
- Clamp for ISO 1127

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**Standard documentation package:**

- Declaration of compliance with Regulation (EC) No.: 1935/2004
- Declaration of compliance to EN 10204 type 3.1 (MTR)
- Declaration of compliance to the U.S. Food & Drug Administration CFR 21 (non-metallic parts)
- Declaration of compliance to the U.S. Pharmacopeia (Elastomers and polymers) - EPDM only
- TSE (Transmissible Spongiform Encephalopathy) / ADI (Animal Derivative Ingredient) Declaration
- Declaration of surface finish compliance
- Declaration of passivation and electro polishing (if specified)
- 3.1 certification in accordance to EN10204
- Pump performance test certificate

**Optional documentation:**

- Hydrostatic test certificate
- surface measurement report

**Ordering**

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

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